

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A ~~composite~~ radiation shielding material comprising:
Portland cement ~~or blended cement including Portland cement~~; and
at least one metallic material selected from the group consisting of iron, carbon steel
and stainless steel in any of particulate, powder and fiber forms; and wherein
the radiation shielding material has a content of calcium hydroxide being in a range of
15% to 60% by mass after hardening through hydration reaction, and the content of the at
least one metallic material ~~being~~ is in a range of 10% to 70% by mass after hardening through
hydration reaction.

Claim 2 (Currently Amended): The ~~composite~~ radiation shielding material according
to claim 1, wherein the content of calcium hydroxide is in a range of 20% to 50% by mass
after hardening through hydration reaction.

Claim 3 (Currently Amended): The ~~composite~~ radiation shielding material according
to claim 1, wherein the content of the metallic material is in a range of 30% to 70% by mass
after hardening through hydration reaction.

Claim 4 (Currently Amended): The ~~composite~~ radiation shielding material according
to claim 1, wherein said Portland cement is included in blended cement which is prepared by
mixing at least one material selected from the group consisting of blast-furnace slag, water-
granulated blast-furnace slag, air-cooled blast-furnace slag, air-cooled slag, converter slag,
copper slag, ferronickel slag, silica fume, fly ash, coal ash, clay, shirasu, diatomaceous earth
and grain ash with Portland cement.

Claim 5 (Currently Amended): The ~~composite~~ radiation shielding material according to claim 1, further comprising a neutron-absorbing material which is mixed in such a manner that the content of the neutron-absorbing material is in a range of 0.025% to 10% by mass after hardening through hydration reaction.

Claim 6 (Currently Amended): The ~~composite~~ radiation shielding material according to claim 5, wherein the neutron-absorbing material includes at least one substance selected from the group consisting of boron carbide, boric acid, boron oxide, ferroboron and borated stainless steel.

Claim 7 (Currently Amended): ~~Concrete manufactured by using a composite~~ A concrete radiation shielding material comprising Portland cement ~~or blended cement including Portland cement~~, and at least one metallic material selected from the group consisting of iron, carbon steel and stainless steel in any of particulate, powder and fiber forms, and wherein the concrete radiation shielding material has a content of calcium hydroxide ~~being~~ in a range of 15% to 60% by mass after hardening through hydration reaction, and the content of the at least one metallic material ~~being~~ is in a range of 10% to 70% by mass after hardening through hydration reaction.

Claim 8 (Withdrawn): A concrete cask comprising:
a cask body having a bottom but no lid in itself; and
a lid which can open and close off a top opening of said cask body;
wherein at least one of said cask body and said lid is made of concrete manufactured by using a composite comprising:

Portland cement or blended cement including Portland cement, and
at least one metallic material selected from the group consisting of iron, carbon steel
and stainless steel in any of particulate, powder and fiber forms, and
content of calcium hydroxide being in a range of 15% to 60% by mass after hardening
through hydration reaction, and the content of the metallic material being in a range of 10%
to 70% by mass after hardening through hydration reaction.

Claim 9 (Withdrawn): The concrete cask according to claim 8, wherein said cask body
is made of said concrete and metallic heat-transfer fins are embedded in said cask body.

Claim 10 (Withdrawn): A method of manufacturing concrete by using a composite
comprising Portland cement or blended cement including Portland cement, and at least one
metallic material selected from the group consisting of iron, carbon steel and stainless steel in
any of particulate, powder and fiber forms, and content of calcium hydroxide being in a range
of 15% to 60% by mass after hardening through hydration reaction, and the content of the
metallic material being in a range of 10% to 70% by mass after hardening through hydration
reaction, said method comprising the steps of:

adding at least water to said composite;
mixing said composite with the water and shaping a resultant mixture; and
curing the mixture for at least 8 hours at a temperature of 120°C to 240°C and a
relative humidity of 80% to 100%.

Claim 11 (Withdrawn): A method of manufacturing concrete by using a composite
comprising Portland cement or blended cement including Portland cement, and at least one
metallic material selected from the group consisting of iron, carbon steel and stainless steel in

any of particulate, powder and fiber forms, and content of calcium hydroxide being in a range of 15% to 60% by mass after hardening through hydration reaction, and the content of the metallic material being in a range of 10% to 70% by mass after hardening through hydration reaction, said method comprising the steps of:

adding at least water to said composite;
mixing said composite with the water and shaping a resultant mixture; and
curing the mixture for at least 24 hours at a temperature of 60°C to 120°C and a relative humidity of 80% to 100%.

Claim 12 (Withdrawn): A composite comprising Portland cement, characterized in that content of a hydroxide material is at least 15% by mass after hardening through hydration reaction, said hydroxide material retains water in the form of a crystalline structure and said hydroxide material has melting and decomposition temperatures exceeding 100°C.

Claim 13 (Withdrawn): The composite according to claim 12, wherein said hydroxide material is a hydroxide which is least soluble or insoluble in pure water.

Claim 14 (Withdrawn): The composite according to claim 13, wherein the soluble amount of the hydroxide is 15 g or less per 100 g of pure water at 20°C.

Claim 15 (Currently Amended): The ~~composite~~ radiation shielding material according to claim ~~12~~ 1 further comprising at least one metallic material selected from the group consisting of iron, copper, tungsten, iron alloy, copper alloy, tungsten alloy, iron compound, copper compound and tungsten compound in any of particulate, powder and fiber forms.

Claim 16 (Currently Amended): The ~~composite~~ radiation shielding material according to claim 15, wherein at least one metallic material selected from the group consisting of iron, iron alloy, copper and copper alloy is mixed in said composite in such a manner that the content of the at least one metallic material falls in a range of 10% to 70% by mass after hardening through hydration reaction.

Claim 17 (Withdrawn): The composite according to claim 15, wherein the metallic material is selected from the group consisting of copper, copper alloy, tungsten, tungsten alloy and tungsten compound.

Claim 18 (Withdrawn): The composite according to claim 15, wherein at least one metallic material selected from the group consisting of tungsten, tungsten alloy and tungsten compound is mixed in said composite in such a manner that the content of the metallic material falls in a range of 10% to 85% by mass after hardening through hydration reaction.

Claim 19 (Withdrawn): The composite according to claim 13 further comprising a neutron-absorbing material selected from the group consisting of boron carbide, boric acid, boron oxide, ferroboration and borated stainless steel, wherein the neutron-absorbing material is mixed in such a manner that the content of the neutron-absorbing material falls in a range of 0.025% to 10% by mass after hardening through hydration reaction.

Claim 20 (Withdrawn): The composite according to claim 12 further comprising a silica-bearing material.

Claim 21 (Withdrawn): Concrete manufactured by using a composite comprising

Portland cement, and content of a hydroxide material retaining water in the form of a crystalline structure of which melting and decomposition temperatures exceed 100°C is at least 15% by mass after hardening through hydration reaction.

Claim 22 (Withdrawn): A concrete cask manufactured by using the concrete of claim 7, wherein at least part of a structure made of the concrete is covered by a covering for isolating the concrete from external air.

Claim 23 (Withdrawn): A concrete cask manufactured by using the concrete of claim 21, wherein at least part of a structure made of the concrete is covered by a covering for isolating the concrete from external air.

Claim 24 (Withdrawn): A method of manufacturing concrete by using a composite comprising Portland cement, wherein content of a hydroxide material retaining water in the form of a crystalline structure of which melting and decomposition temperatures exceed 100°C is at least 15% by mass after hardening through hydration reaction, said method comprising the steps of:

- adding at least water to said composite;
- mixing said composite with the water and shaping a resultant mixture; and
- curing the mixture for at least 8 hours at a temperature of 120°C to 240°C and a relative humidity of 80% to 100%.

Claim 25 (Withdrawn): A method of manufacturing concrete by using a composite comprising Portland cement, wherein content of a hydroxide material retaining water in the form of a crystalline structure of which melting and decomposition temperatures exceed

100°C is at least 15% by mass after hardening through hydration reaction, said method comprising the steps of:

- adding at least water to said composite;
- mixing said composite with the water and shaping a resultant mixture; and
- curing the mixture for at least 24 hours at a temperature of 60°C to 120°C and a relative humidity of 80% to 100%.